

Title (en)

Conductivity sensor arrangement, in particular for measuring the conductivity of fluids

Title (de)

Leitfähigkeitssensoranordnung, insbesondere zum Messen der Leitfähigkeit von Flüssigkeiten

Title (fr)

Agencement de capteur de conductivité, en particulier pour mesurer la conductivité de liquides

Publication

EP 2784492 B1 20180919 (EN)

Application

EP 13161482 A 20130327

Priority

EP 13161482 A 20130327

Abstract (en)

[origin: EP2784492A1] The invention relates to a conductivity sensor arrangement (1) and to a method in particular for measuring the conductivity of fluids (14). Known conductivity sensors for identifying fluids based on their conductivity are not satisfactory as they are not easy to calibrate, not easy to maintain and operate only in a very limited temperature range. These problems can be avoided if the conductivity sensor arrangement (1) comprises a sampling coil system (2) for measuring conductivity, a compensating coil system for compensating measurement errors of the sampling coil system, wherein the compensating coil system (3) is magnetically insulated from the sampling coil system (3). The insulation is preferably obtained by arranging at least one ferrite layer between the sampling coil system (2) and the compensating coil system (3). The ferrite layer may contain or consist of a hard ferrite material, in particular a NiZn-Ferrite. The sampling and compensating coil systems (2, 3) may be planar. The conductivity is measured by generating and measuring a first magnetic field reaching into the fluid (14) by the sampling coil system (2). At the same time, a second magnetic field (24) is generated and measured, which is magnetically insulated from the first magnetic field (13, 16).

IPC 8 full level

G01N 27/02 (2006.01); **G01R 27/22** (2006.01)

CPC (source: EP)

G01N 27/025 (2013.01); **G01R 27/22** (2013.01)

Citation (examination)

US 6600311 B1 20030729 - TAWARATSUMIDA SUKOYA [JP], et al

Cited by

WO2019091499A1; WO2023280748A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

EP 2784492 A1 20141001; EP 2784492 B1 20180919

DOCDB simple family (application)

EP 13161482 A 20130327